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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,476	09/19/2003	Sujit Sharan	042390p11355C	8873

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INTEL CORPORATION
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EXAMINER

SMITH, NICHOLAS A

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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05/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/666,476		SHARAN, SUJIT	
	Examiner		Art Unit	
	NICHOLAS A. SMITH		1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9, 10 and 16-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9, 10 and 16-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Claims 9-10 and 16-28 remain for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9, 10 and 16-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uzoh et al. (US Patent 5,807,165).
4. Uzoh et al. is applied to the claims for the same reasons as stated in paragraph(s) 5-8 and 11-14 of the previous office action.
5. In regards to claim amendment "a segmented anode disposed between a rear surface of said wafer and said wafer carrier, said segmented anode being partitioned into small components that may be adjusted separately to change polishing rates for different materials," Uzoh et al. does teach a segmented anode disposed between said wafer and said wafer carrier (Fig. 8-10), particularly between the side of the wafer and the inside portion of the wafer carrier. Furthermore, Uzoh et al. teaches a segmented anode disposed between a rear surface of said wafer and said wafer carrier, in particular, a segmented anode (Fig. 8, **67**) is between a portion of wafer carrier (**66**), for instance the left side of **66** (encircled by area **9** on Fig. 8) and a rear surface of said wafer (the top surface of **W**) in the region **R**. Furthermore, the anode is capable of

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changing polishing rates for different materials since different materials have different potentials and are thus polished at different rates (col. 5, lines 33-40).

6. In regards to claim 9 amendment "a computer to vary said voltage to improve uniformity of said polishing rates," Uzoh et al. discloses such a computer (column 5, lines 10-33), and such a computer is inherently capable of improving uniformity of polishing rates by controlling the voltage, in that polishing rate is dependent on the metal layer being polished, electrolyte composition, mechanical polishing pressure, polishing pad rotation speed and potential applied to the electrode. With all other variables being equal, a polishing rate would be more uniform as a computer maintains a voltage applied.

7. In regards to claim(s) 9 amendment "a segmented cathode disposed around edge of said polishing pad," Uzoh et al. discloses such a cathode in that a slip ring that encircles the edge of a polishing pad is conductive and therefore is a cathode (col. 6, lines 11-25).

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uzoh et al. in view of Emesh et al. (US 6,572,755).

9. Uzoh et al. in view of Emesh et al. is applied to the claims for the same reasons as stated in paragraph(s) 15-17 of the previous office action.

10. Claims 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uzoh et al. in view of Parikh et al. (US 2003/0040830).

11. Uzoh et al. in view of Parikh et al. is applied to the claims for the same reasons as stated in paragraph(s) 18-20 of the previous office action.

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12. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uzoh et al. in view of Walters et al. (US 6,767,427).

13. Uzoh et al. in view of Walters et al. is applied to the claims for the same reasons as stated in paragraph(s) 22-23 of the previous office action.

Response to Arguments

14. Applicant's arguments filed 18 January 2008 have been fully considered but they are not persuasive. In regards to Applicant's argument that a cathode does not encircle the polishing pad, please see paragraph 7 above. In regards to Applicant's argument that Uzoh et al. does not teach a segment anode between rear surface of a wafer and a wafer carrier, please see paragraph 5 above.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

16. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas A. Smith whose telephone number is (571)-272-8760. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Susy Tsang-Foster can be reached on (571)-272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NAS
/Susy N Tsang-Foster/
Supervisory Patent Examiner, Art Unit 1795

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